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STUDY FOR THE IMPROVEMENT OF MOTIVATION
IN THE SHIPBUILDING INDUSTRY

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As a Professor at San Jose State University, Dr. Muench is currently involved in teaching, clinical and consulting practice, and research in clinical and industrial psychology. He has held an impressive array of teaching, research, administrative and consulting positions in government and private organizations.

This study is intended to be read in its entirety. The results of the study develop optimum significance and meaning when perceived within the emergent process of the research. The first chapter introduces the study in terms of its purposes and procedures. The next chapter surveys the general literature pertinent to motivation industry organized according to the research plan of this study. The next chapter reports in depth the results from the current study, including composite data for the total industry, as well as a brief comparison of ten separate local shipyards.

Although executives involved in the decision-making process in the industry would be well advised to read the entire study, many executive would find such reading to be a luxury prohibited by other critical time commitments. Therefore, the primary results of the study have been **summarized in terms of pertinent conclusions and recommendations** for the immediate utilization by the interested but busy executive.

Executive Summary

One of the most significant motivating factors for workers is to believe that the company management is interested in the individual worker and his problems and is willing to attempt to do something about them. Although a limited understanding of workers' needs may be obtained from the research literature on worker motivation, since workers are unique, the only way to really understand the workers' needs in a particular

industry or particular company is to directly ask the individual local workers. Further, even the process of attempting to determine the worker's needs and problems is motivating, since it tends to help the worker to feel that the company cares enough to ask him. Those responsible for initiating this study, then, have taken a significant first step in improving motivation.

Since motivation in industry is a complex phenomenon, for the purpose of this study motivation has been analyzed in terms of relationships to' some of its various segments beginning with job satisfaction, the core factor around which all the other dimensions of the motivational process would evolve. The factors, in addition to job satisfaction include job commitment and morale, job importance, working conditions and benefits, workers' perceptions of co-workers, promotion, and supervisor-worker relationships.

The body of the report is organized around the aforementioned categories and the results are reported accordingly. For the purpose of this summary, however, an attempt is made to utilize the direct data from this study interrelated with other research data to present some conclusions and recommendations which are aimed toward developing a more effective motivational system at the local shipyard level. These conclusions relate mainly to the quantitative data and are presented, not in terms of priority importance, but in sequential order.

1. Nearly 1,300 employees, representing all segments of personnel at ten shipyards, were utilized for this study. From this total sample, only a small percentage of workers chose shipbuilding because of a love of the sea, or family tradition, or patriotic reasons; most workers took a job at a shipyard primarily because a job was available. There tends to be no more romantic worker identification with obtaining a job in a shipyard than in comparable industries.

2. While recognizing the validity of the above finding, there is another finding which relates to work pride regarding both product and process. Nearly all shipyard workers deem both shipbuilding as an industry and their own job in the process of shipbuilding to be essential for the national defense, economy and commerce of this country. This product identification has not been sufficiently emphasized at most shipyards. Employee pride related to product is, if effectively utilized, an inherent motivator.

3. Current literature tends to indicate that the industrial worker in America is Unhappy with his job. The interviewers for this study expended most of their interview time in listening to worker complaints and negative comments related to both job and company. When a final evaluation needed to be made, however, most workers tended to rate their overall job satisfaction high and, at least at America's shipyards, had a high level of job identification.

4. Worker motivation tends to increase when jobs are designed to provide the worker with what he perceives to be

meaningful work. When his job allows the worker to feel personally responsible for a meaningful portion of his work, and provides results which are perceived as worthwhile to the individual worker, motivation increases. Further, the job must match the capabilities and skills of the employee. If a job is too frustrating or difficult, or too simple and boring, motivation decreases. To effectively match the employee to his job requires continual evaluation of each job and the employee qualities necessary to fulfill it.

5. Although most shipyard workers believe their job in an essential industry to be highly important, many believe that their company's management has no interest in them as persons, is unaware of what they do, and is oriented to machines rather than persons.

6. Most hourly production workers believe that they do not influence the company in any important ways. The fewer than twenty percent of the workers who believe their influence is important perceive that influence to come primarily in the way they perform their own job. The majority of workers who believe that they cannot influence the company in important ways cited that it was futile to try, that the company didn't care or was too big or set in its ways, or that their low position or lack of knowledge prohibited their influence.

7. The most common spontaneous complaint **among production** workers which is related to working conditions **concerned**

inadequate scheduling, planning, coordinating and communication between crafts, shifts and various working groups in the shipyard. The second greatest number of complaints related to inadequate machines, equipment and materials. The third most common complaint concerned some aspect of the physical working environment.

8. Safety was the physical factor most frequently discussed by the workers and, although all were concerned with safety, about as many believed the company to be safety conscious and working on improving safety conditions as believed the yard to be negligent related to safety. Safety was considered a greater problem to hourly production workers than any other employee group.

9. The workers' perceptions of the adequacy of their wages produced a mixed result. Some workers believed the pay to be superior to that in some comparable industries; others believed their pay to be low and not comparable to other companies or construction workers. Wages tended to be less a problem, however, to most workers than problems already cited.

10. Wages become increasingly motivating when workers perceive that their pay is directly related to their performance. Oftentimes pay is related to non-performance factors such as job level or seniority and, therefore, comparatively less motivating. Consequently, some companies have elected to use some incentive system to tie wages more closely to production. Normally most incentive systems indicate greater success by

relating to an individual, rather than group, performance. The experience of at least one shipyard suggests some evidence to the contrary. Although the incentive pay tied to the individual's work performance has been normally most motivating, more experimentation needs to be done with group incentive programs in order to determine whether the group incentive, when effectively organized, may prove additionally motivating due to group identification or group pressures not present in individual incentive plans.

11. If effectively done, measuring a worker's performance can be highly motivating. This means that an effective job measurement system including specific criteria for evaluation must be available in addition to a feedback system which provides the worker with immediate knowledge of results and recognition for superior performance.

12. One of the most important motivational factors is the relationship of the worker to his immediate supervisor. Although it is impossible to define all of the characteristics of the "perfect" supervisor, effective leadership does include the leader's sensitivity to those factors which influences the personal and interpersonal work behavior of group members, the ability to analyze those factors impairing personal or group effectiveness, and the empathy and consideration necessary to individual needs which allow the group to keep moving.

13. The current study indicates that the employee's relationship to his immediate supervisor is a key one, and

for a Significant majority, a positive one. Among the positive factors most frequently mentioned about the workers' immediate supervisor include the following: his technical competence, fair treatment, good human relationships, helpful, and freedom to do the job. The negative comments related to the workers' immediate supervisor were fewer and less consistent but included the following: overcritical, shows favoritism, inadequate leader, poor communicator, technically incompetent. For most employees, the relationship with the immediate supervisor tends to be better than the workers' opinion of and relationship with higher management.

14. Feedback at all levels is essential. An employee will tend to improve his performance if he has continuing feedback related to his progress. It is as important for the supervisor at the upper levels of management to give consistent feedback related to performance as it is for the supervisor of the hourly worker. Feedback, both positive and negative, needs to be clearly understood by both supervisor and worker, and presented in a manner which motivates constructive short and long-range changes.

15. Some workers are more motivated when the supervisor gives them a considerable amount of his time while other workers work best with a minimum of supervisor surveillance. For example, the younger workers tend to need and request more attention and direction from their supervisors than do the older, more experienced workers. In fact, sometimes the

older workers consider the supervisory attention more of an interference than a help. However, some workers, no matter their age and experience, need considerable feedback, so that the useful generalization related to age still must be individually applied.

16. Positive reinforcement (commending good performance) is generally considered a superior motivator to negative reinforcement (reproof for poor performance) . Generally the shipyard industry, at all levels of the organization, emphasizes negative rather than positive reinforcement. Some companies in industries other than shipbuilding who have attempted a change from censure to commendation report immediate and, occasionally, miraculous positive results.

17. Although positive reinforcement is generally a superior motivator to negative reinforcement, some employees, normally the most competent ones, may be motivated by reproof rather than commendation, or are self-motivated and need little external motivation. The principle of reinforcement, like every motivation technique, must be applied appropriately to the unique needs of the individual worker. Generally positive reinforcement is the superior motivator but, to be optimally effective, the supervisor must understand his workers well enough to discern which motivational techniques work best for each worker.

18. Some employees are sufficiently motivated by internal satisfactions which come from the employee's own realization

that he has done an effective or superior job. Most workers, however, in addition to internal satisfaction, also need external recognition. Merit salary increases, promotions and increased responsibility and recognition are common and effective ways to acknowledge deserving performance. Since such recognition is not always possible, these means may need to be supplemented by a recognition system which provides other kinds of rewards or awards to individuals or groups for exceptional performance.

19. Employees at all levels of the shipyard tend to have a high regard for their co-workers, including both technical competence and positive interpersonal relationships. This "finding was one of the most consistent and significant results from the study.

20. Only about one-half of the hourly production workers, however, believe that the majority of their co-workers worked sufficiently hard to do the job although, generally, the closer the proximity of the worker, the harder he was perceived to work. That is, most workers indicate that they work harder than their immediate peers, who work harder than workers in other related departments, who work harder than workers in most departments more distant from the workers' station.

21. In comparing production managers to hourly production workers, the conclusions are as follows: production managers have higher job satisfaction, enjoy their jobs more, identify more with the company; have higher morale, perceive that they

have a greater influence at the company, believe that their problems and recommendations get greater action, are more satisfied with wages and benefits with the exception of longer unpaid working hours, believe safety conditions to be better, and have a greater desire to be promoted, have a higher expectation of being promoted, and think more highly of the promotion process.

22. Much experimentation has occurred with participative management or participative decision-making as a motivational concept. Most studies, both within and without the ship-building industry, indicate that participative decision-making normally results in increased motivation and productivity of those involved. When the worker participates in making decisions which effect him, he is more likely to be motivated to make those decisions succeed. The success is greater when the employees possess high competence and high needs for independence and are members of a group that favor participation. The quality of the group decisions are enhanced when the employees have sufficient relative information and time for discussion, and when employee self-interests do not conflict with the group interests.

23. Effective communication within a company demands constant vigilance. Every shipyard represented in this study suffered from communication problems, some severe. It may be impossible to eliminate all problems of communication within an organization but much can be done to improve communication. First, there must be a genuine desire to communicate at the

various levels of the organization. Second, communication must be recognized as multi-dimensional with attention given to horizontal as well as two-way vertical communication. This means that effective communication channels need to be found to transmit information from management to employees and, an area frequently ignored, from the employees to management. Formal means of communication, such as company newspapers, closed-circuit television, employee suggestion systems, attitude measurement programs and the like, need to be supplemented by more human contacts of management and workers. This is difficult in large organizations, but some companies find that when top management gets out of the confines of their administrators' offices and has direct personal contact with the workers through plant tours, informal talks, etc. that both communication and motivation improve.

24. Contrary to certain research hypotheses held prior to this study which presupposed a less than healthy shipbuilding industry, the results of this study are encouraging in that many more strengths than weaknesses are apparent at most shipyards. This does not mean that serious motivational problems do not exist. It does mean that for most yards the strengths portend both the ability and the motivation to recognize weaknesses and attempt to alleviate them. An attempt has been made in this report to crystallize inter-company and intra-company comparisons according to the factors utilized in this study. Hopefully these data may be used as the foundation to develop programs at the local yards aimed at perfecting the motivational processes.

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